

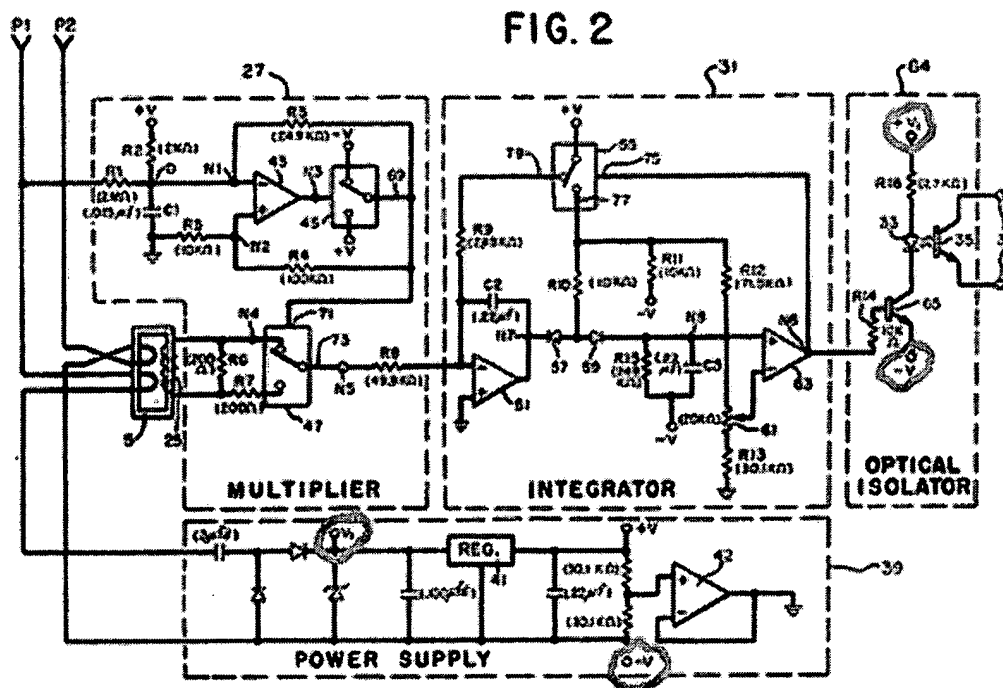
REMARKS

Claims 1-20 were rejected in the office action. Claims 21-31 previously have been withdrawn. Claims 1, 3, 7, 8, 18 and 19 have been amended. No claims have been canceled or added. Therefore, following entry of the present response, claims 1-20 will remain pending in the present application.

Claims 1-10, 13, 14, 18 and 20 stand rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 4,437,059 to Hauptmann ("Hauptmann"). In particular, the office action suggests, *inter alia*, that Hauptmann's Figure 2 discloses an electrical power meter with "an optical diode [33] *in series* with the power supply [39]." (*Office Action dated My 25, 2006* at p. 3) (emphasis added). With all due respect to the contentions in the office action, applicants respectfully disagree.

As one skilled in the art would recognize, Hauptmann's optical diode 33 is in parallel with the power supply 39. Hauptmann's optical diode 33 is clearly not in series with the power supply 39. Simple circuit analysis of Hauptmann's circuit depicted in Figure 2 and the above description shows that the optical diode 33 acts as a parallel load and draws current from $+V_1$ to $-V$ of the power supply 39.

The following page of this response shows Hauptmann's Figure 2. The voltage terminals $+V_1$ and $-V$ of power supply 39 are shown in the power supply, and are repeated for clarity in optical isolator 64 as $+V_1$ and $-V$. In other words, the $+V_1$ and $-V$ of power supply 39 provides a voltage in parallel across optical diode 33. These terminals show that the optical diode 33 is in parallel with the power provided by the power supply. The voltage terminals in power supply 39, and repeated within optical isolator 64, are highlighted in this response for emphasis purposes.



Therefore, Hauptmann does not anticipate the presently claimed embodiments, which recite a series arrangement of an optical diode to a power supply.

Accordingly, applicant respectfully requests withdrawal of the rejection of claims 1-10, 13, 14, 18 and 20 under 35 U.S.C. 102(b) over Hauptmann.

Claims 11-12 and 15 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Hauptmann in view of U.S. Patent No. 5,274,082 to Litz *et al.* ("Litz"). Also, claims 16-17 and 19 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Hauptmann in view of U.S. Patent No. 6,504,357 to Hemminger *et al.* ("Hemminger") or to U.S. Patent No. 5,555,508 to Munday *et al.* ("Munday").

For the same reasons discussed above, applicant respectfully requests withdrawal of the rejection of claims 11-12 and 15 under 35 U.S.C. 103(a) over Hauptmann and Litz, and

the rejection of claims 16-17 and 19 under 35 U.S.C. 103(a) over Hauptmann and Hemminger or Munday.

Claims 1-20 stand rejected under 35 U.S.C. 112, second paragraph, allegedly as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, claim 1 is rejected allegedly “for omitting essential structural cooperative relationships . . . : 1) between optical diode and the electronic components, and 2) between metering circuit and the electronic components.” (*Office Action dated May 25, 2006* at p. 3). Applicant assumes that the “electronic components” recited by the office action refers to the preamble. Applicant has amended the claims to remove recitation to “electronic components.”

Accordingly, applicant respectfully requests withdrawal of the rejection of claims 1-20 under 35 U.S.C. 112, second paragraph.

Also, the drawings were objected to under 37 CFR 1.83(a) allegedly because “the electric components of claim 1” were not shown. (*Office Action dated May 25, 2006* at p. 2). As amended, claim 1 does not recite “electric components.” Claim 1 recites a power supply, an optical diode in series with the power supply, and a metering circuit in series with the optical diode. These components are clearly described throughout the entire specification, and specifically with reference to Figure 3.

Accordingly, applicants respectfully request withdrawal of the objection to the drawings under 37 CFR 1.83(a).

Finally, claim 1 was objected to because of the following alleged informalities “it is not clear how an optical diode is in series with the power supply where a metering circuit (that is in series with the optical diode) is parallel with the power supply.” (*Office Action dated May 25, 2006* at p. 3). Figure 3 clearly illustrates this circuit configuration. Power supply 307 is in series with optical diode 301. Metering circuit 306 is in series with optical diode 301. Metering circuit 306 is in parallel with power supply 307. Applicant respectfully asserts that the circuit configuration cannot be more clear. If the Examiner wishes to continue this objection, applicant respectfully requests the Examiner to contact the applicant for further clarification, and/or address the objection with specific reference to Figure 3.

CONCLUSION

In view of the foregoing, applicant respectfully submits that the claims are allowable and that the present application is in condition for allowance. Reconsideration of the application and an early Notice of Allowance are respectfully requested. In the event that the Examiner cannot allow the present application for any reason, the Examiner is encouraged to contact the undersigned attorney, Vincent J. Roccia at (215) 564-8946, to discuss resolution of any remaining issues.

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